AMENDMENTS TO THE CLAIMS:

Kindly amend claims 1, 15, 17, 24, 29, 44 and 46, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (Currently amended): A multiple degree-of-freedom motor comprising:

an output shaft;

a stator comprising first and second lamination stacks, each said lamination stack having an interior curved surface and a coil wound thereon, said lamination stacks being disposed asymmetrically adjacent said output shaft, whereby each of said lamination stacks is without a complimentary, similarly positioned lamination stack on an opposing side of said output shaft; and

a rotor fixed to said output shaft and movably supported adjacent said stator with an air gap disposed between said rotor and said stator, said rotor including at least one magnet disposed thereon, the magnet ~~and~~ being movable along said interior curved surface of said lamination stacks in directions defining at least first and second degrees of freedom;

wherein energization of the coil of said first lamination stack establishes a first magnetic field to urge said output shaft to rotate in a first plane, and wherein energization of the coil of said second lamination stack establishes a second magnetic field to urge said output shaft to rotate in a second plane substantially orthogonal to the first plane.

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Claim 2 (Original): The motor of claim 1, wherein said first degree of freedom is substantially perpendicular to a longitudinal axis of wires of one of said coils associated with the first degree of freedom, and said second degree of freedom is substantially perpendicular to a longitudinal axis of wires of the other of said coils.

Claim 3 (Original): The motor of claim 1, wherein said interior curved surface substantially defines at least a portion of a sphere.

Claim 4 (Original): The motor of claim 1, wherein said curved interior surface is uniformly curved.

Claim 5 (Original): The motor of claim 1, wherein said interior curved surface has a plurality of slots formed therein.

Claim 6 (Original): The motor of claim 5, wherein said slots lie in planes substantially parallel to one another.

Claim 7 (Original): The motor of claim 1, wherein at least one said lamination stack comprises a plurality of laminations radially disposed about a center point, with a plane of each lamination extending through said center point.

Claim 8 (Original): The motor of claim 1, wherein at least one said lamination stack has an interior curved surface with no slots formed therein.

Claim 9 (Original): The motor of claim 1, wherein at least one said magnet is a permanent magnet.

Claim 10 (Original): The motor of claim 1, wherein at least one said magnet is faceted.

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Claim 11 (Original): The motor of claim 1, wherein the output shaft is also an input shaft.

Claim 12 (Original): The motor of claim 11, further comprising at least one sensor for detecting movement of said input shaft.

Claim 13 (Original): The motor of claim 1, further comprising a cooling fan.

Claim 14 (Original): The motor of claim 1, further comprising a communications interface for providing input and/or output signals to detect and/or control the position of said output shaft.

Claim 15 (Currently amended): The motor of claim 1, wherein said stator further comprises a third lamination stack having an interior curved surface and a coil wound thereon;

wherein said third lamination stack ~~is~~ comprises laminations substantially orthogonal to a plurality of laminations that form said first and second lamination stacks;

wherein said rotor includes at least one magnet disposed thereon and being movable along said interior curved surface of said third lamination stack in a direction defining a third degree of freedom;

wherein energization of the coil of said third lamination stack establishes a third magnetic field to urge said output shaft to rotate in a third plane substantially orthogonal to each of said first and second planes.

Claim 16 (Original): The motor of claim 15, wherein said third lamination stack has slots formed therein, said slots lying in planes substantially parallel to one another.

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Claim 17 (Currently amended): A multiple degree-of-freedom motor comprising:

an output shaft;

first and second stator coils disposed asymmetrically adjacent said output shaft, whereby each of said stator coils is without a complimentary, similarly positioned ~~lamination stack~~ stator coil on an opposing side of said output shaft;

a rotor fixed to said output shaft and movably supported adjacent said stator coils with an air gap disposed between said rotor and said stator coils, said rotor including at least one magnet disposed thereon, the magnet ~~and~~ being movable in directions defining at least first and second degrees of freedom;

wherein energization of the first stator coil establishes a first magnetic field to urge said output shaft to rotate in a first plane, and wherein energization of the second stator coil establishes a second magnetic field to urge said output shaft to rotate in a second plane substantially orthogonal to the first plane.

Claim 18 (Original): The motor of claim 17, wherein said first degree of freedom is substantially perpendicular to a longitudinal axis of wires of said first stator coil associated with the first degree of freedom, and said second degree of freedom is substantially perpendicular to a longitudinal axis of wires of said second stator coil.

Claim 19 (Original): The motor of claim 17, wherein at least one said magnet is a permanent magnet.

Claim 20 (Original): The motor of claim 17, wherein at least one said magnet is faceted.

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Claim 21 (Original): The motor of claim 17, wherein the output shaft is also an input shaft.

Claim 22 (Original): The motor of claim 21, further comprising at least one sensor for detecting movement of said input shaft.

Claim 23 (Previously presented): The motor of claim 17, wherein said stator further comprises a third coil oriented orthogonal to said first and second coils;

wherein said rotor includes at least one magnet disposed thereon and being movable in a direction defining a third degree of freedom;

wherein energization of the third stator coil establishes a third magnetic field to urge said output shaft to rotate in a third plane substantially orthogonal to each of said first and second planes.

Claim 24 (Currently amended): A method of moving an output shaft in multiple degrees of freedom, said method comprising:

disposing first and second stator coils asymmetrically adjacent said output shaft, whereby each of said stator coils is without a complimentary, similarly positioned ~~lamination stack~~ stator coil on an opposing side of said output shaft;

fixing a rotor to said output shaft, said rotor being movably supported adjacent said stator coils with an air gap disposed between said rotor and said stator coils, said rotor including at least one magnet disposed thereon, the magnet ~~and~~ being movable in directions defining at least first and second degrees of freedom; and

urging said output shaft to rotate in one of a first and second plane by respectively energizing the first or second stator coil, wherein said energization of the respective stator

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coils establishes magnetic fields to urge said output shaft to rotate in planes substantially orthogonal to one another.

Claim 25 (Original): The method of claim 24, wherein at least one said magnet is faceted.

Claim 26 (Previously presented): The method of claim 24, further comprising:

disposing a third stator coil adjacent said output shaft oriented orthogonal to said first and second coils;

fixing said rotor so as to include at least one magnet disposed thereon and being movable in a direction defining a third degree of freedom; and

urging said output shaft to rotate in a third plane by energizing the third stator coil, wherein said energization of the third stator coil establishes a third magnetic field to urge said output shaft to rotate in a third plane substantially orthogonal to each of said first and second planes.

Claims 27-28 (Canceled).

Claim 29 (Currently amended): A multiple degree-of-freedom motor comprising:

an output shaft:

a rotor coupled to the output shaft, the rotor having multiple degrees of freedom; and

a stator comprising a first lamination stack and a second lamination stack, said lamination stacks disposed perpendicular to one another, each lamination stack having a curved interior surface facing the rotor and a coil wound thereon; and

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wherein the laminations of the first lamination stack and second lamination stack are substantially parallel to one another and asymmetrically adjacent to said output shaft, whereby each of said lamination stacks is without a complimentary, similarly positioned lamination stack on an opposing side of said output shaft.

Claim 30 (Original): The motor of claim 29, wherein energization of the coil of the first lamination stack establishes a first magnetic field to urge said output shaft to rotate in a first plane, and wherein energization of the coil of the second lamination stack establishes a second magnetic field to urge said output shaft to rotate in a second plane.

Claim 31 (Original): The motor of claim 29, wherein said stator further comprises a third lamination stack having an interior curved surface and a coil wound thereon;

wherein the laminations of the first and second lamination stacks are substantially perpendicular to the laminations of the third lamination stack; and

wherein energization of the coil of the third lamination stack establishes a third magnetic field to urge said output shaft to rotate in a third plane substantially orthogonal to said first and second planes.

Claims 32–43 (Canceled).

Claim 44 (Currently amended): A multiple degree-of-freedom motor comprising:

an output shaft;

first and second stator coils disposed asymmetrically adjacent said output shaft, whereby each of said stator coils is without a complimentary, similarly positioned ~~lamination stack~~ stator coil on an opposing side of said output shaft, each said stator coil being a spiral coil having a plurality of turns therein, wherein said spiral coil is disposed

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adjacent said output shaft and is wound around an axis generally parallel to the longitudinal axis of said output shaft;

a rotor fixed to said output shaft and movably supported adjacent said stator coils with an air gap disposed between said rotor and said stator coils, said rotor including at least one magnet disposed thereon, the magnet ~~and~~ being movable in directions defining at least first and second degrees of freedom;

wherein energization of the first stator coil by providing current in one direction establishes a magnetic field to urge said output shaft to rotate in a first plane in a clockwise direction, and energization of the first stator coil by providing current in the opposite direction establishes a magnetic field to urge said output shaft to rotate in said first plane in a counter-clockwise direction;

and wherein energization of the second stator coil by providing current in one direction establishes a magnetic field to urge said output shaft to rotate in a second plane in a clockwise direction, and energization of the second stator coil by providing current in the opposite direction establishes a magnetic field to urge said output shaft to rotate in said second plane in a counter-clockwise direction.

Claim 45 (Original): The motor of claim 44, wherein said second plane is substantially orthogonal to said first plane.

Claim 46 (Currently amended): A multiple degree-of-freedom motor comprising:

an output shaft movable in directions defining at least first and second degrees of freedom and having a rotor coupled thereto;

at least one magnet integral with the rotor; and

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first and second stator coils disposed asymmetrically adjacent said output shaft, whereby each of said stator coils is without a complimentary, similarly positioned ~~lamination stack~~ stator coil on an opposing side of said output shaft, each said stator coil being a spiral coil having a plurality of turns therein, wherein said spiral coil is disposed adjacent said output shaft and is wound around an axis generally parallel to the longitudinal axis of said output shaft;

wherein energization of the first stator coil by providing current in one direction establishes a magnetic field to urge said ~~rotor~~ magnet to rotate in a first plane in a clockwise direction, and energization of the first stator coil by providing current in the opposite direction establishes a magnetic field to urge said ~~rotor~~ magnet to rotate in said first plane in a counter-clockwise direction;

and wherein energization of the second stator coil by providing current in one direction establishes a magnetic field to urge said ~~rotor~~ magnet to rotate in a second plane in a clockwise direction, and energization of the second stator coil by providing current in the opposite direction establishes a magnetic field to urge said ~~rotor~~ magnet to rotate in said second plane in a counter-clockwise direction.

Claims 47–53 (Canceled).

Claim 54 (Canceled).

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